



# RT 1223 (12V2.3Ah)

RT 1223 is a general purpose battery with 5 years life in standby service, or more than 260 cycles at 100% D.O.D by cyclic use. As with all Ritar batteries, all RT models are rechargeable, highly efficient, leak proof and maintenance free.

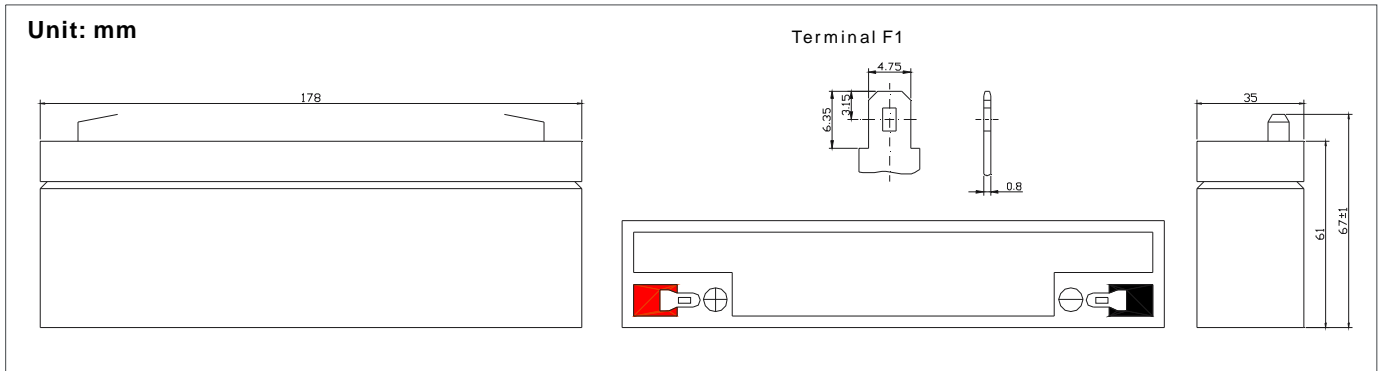


## Specification

<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	2.3Ah@20hr-rate to 1.75V per cell @25°C
<b>Weight</b>	Approx. 0.99 Kg
<b>Max. Discharge Current</b>	23 A (5 sec)
<b>Internal Resistance</b>	Approx. 50 mΩ
<b>Operating Temperature Range</b>	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
<b>Normal Operating Temperature Range</b>	25°C±5°C
<b>Float charging Voltage</b>	13.6 to 13.8 VDC/unit Average at 25°C
<b>Recommended Maximum Charging Current Limit</b>	0.69 A
<b>Equalization and Cycle Service</b>	14.4 to 15.0 VDC/unit Average at 25°C
<b>Self Discharge</b>	RITAR batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
<b>Terminal</b>	Faston Tab 187(F1)
<b>Container Material</b>	A.B.S. (UL94-HB) Flammability resistance of UL94-V2 can be available upon request.



## Dimensions



### Constant Current Discharge Characteristics Unit: A(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	9.55	6.38	4.91	2.70	1.60	0.96	0.59	0.48	0.39	0.29	0.23	0.13
1.67V	8.94	5.95	4.61	2.66	1.59	0.95	0.59	0.48	0.39	0.29	0.22	0.12
1.70V	8.45	5.77	4.51	2.64	1.58	0.95	0.58	0.48	0.38	0.29	0.22	0.12
1.75V	7.64	5.40	4.27	2.58	1.55	0.94	0.58	0.48	0.38	0.29	0.22	0.12
1.80V	6.82	5.03	4.03	2.51	1.53	0.92	0.58	0.47	0.38	0.28	0.21	0.11
1.85V	6.01	4.66	3.80	2.45	1.51	0.91	0.57	0.47	0.38	0.28	0.21	0.11

### Constant Power Discharge Characteristics Unit: W(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	18.4	12.0	9.72	5.40	3.19	1.91	1.18	0.96	0.91	0.57	0.45	0.25
1.67V	17.3	11.5	9.22	5.31	3.18	1.90	1.17	0.96	0.91	0.57	0.44	0.24
1.70V	16.9	11.2	9.01	5.27	3.17	1.90	1.17	0.96	0.90	0.57	0.44	0.24
1.75V	15.3	10.7	8.54	5.15	3.12	1.87	1.16	0.95	0.90	0.57	0.43	0.23
1.80V	13.6	10.0	8.07	5.03	3.07	1.84	1.15	0.95	0.90	0.56	0.43	0.22
1.85V	12.0	9.3	7.60	4.90	3.02	1.81	1.15	0.94	0.90	0.56	0.42	0.21

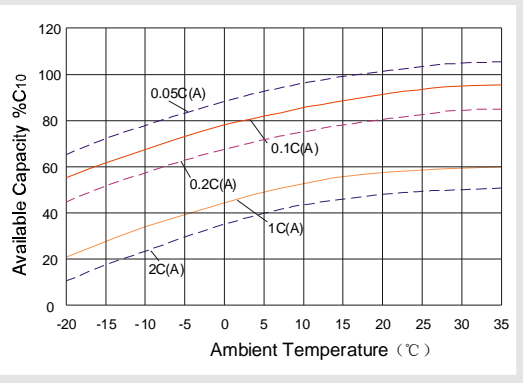
All mentioned values are average values.

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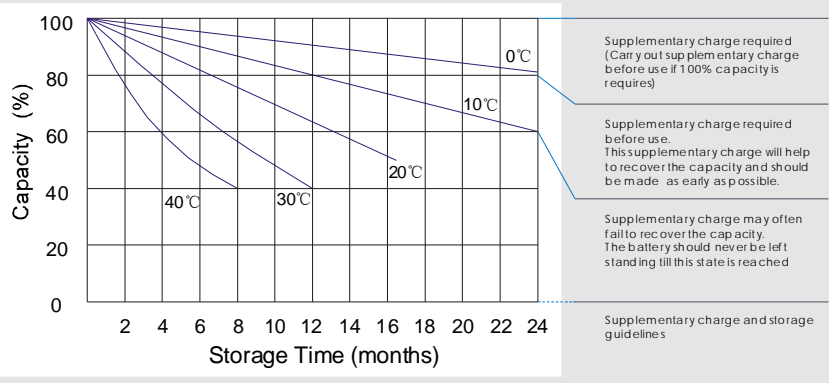
12V2.3Ah



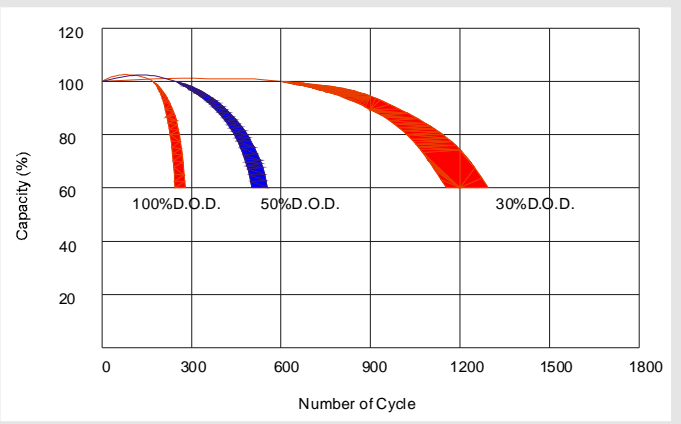
## Temperature effects curve



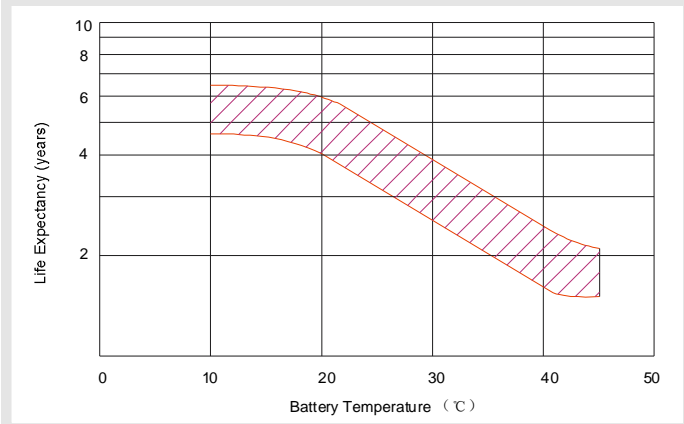
## Storage characteristic



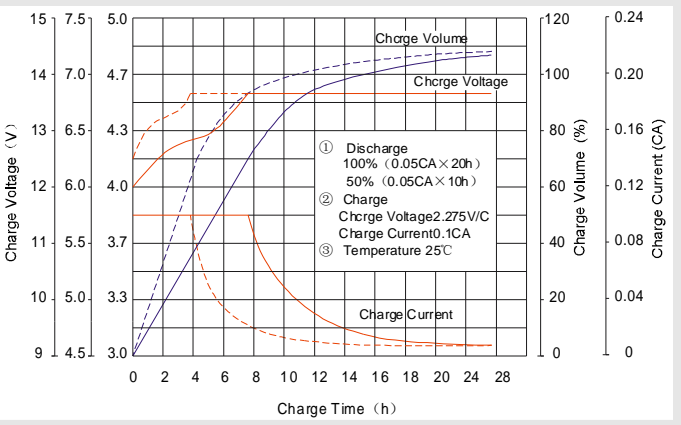
## Life characteristics of cyclic use



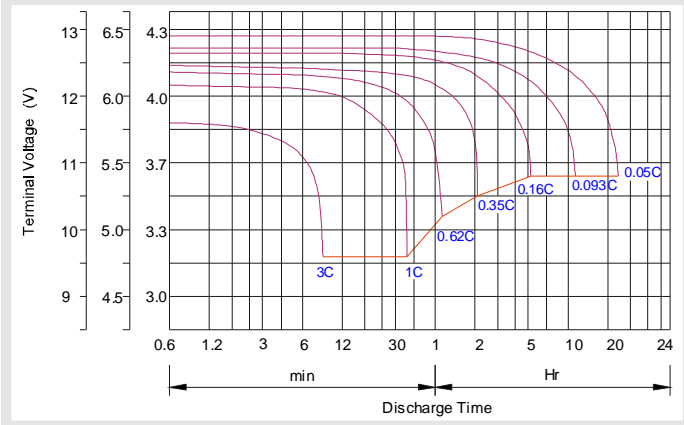
## Effect of temperature on long term float life



## Charge characteristic Curve for standby use



## Discharge characteristic Curve



## Charging Procedures

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	14.7	14.4~15.0	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

## Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C

**Charge the batteries at least once every six months, if they are stored at 25°C.**

Charging Method:

Constant Voltage	-0.2Cx2h +14.4~15.0V,24h,Max. Current 0.3CA
Constant Current	-0.2Cx2h +0.1CAx12h
Fast	-0.2CX2h +0.3CAx4h

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